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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,557

12/28/2004

Oliver Moller

262605US0X PCT

2807

22850

7590

08/11/2006

C. IRVIN MCCLELLAND

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.

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EXAMINER

WITHERSPOON, SIKARL A

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/519,557

Applicant(s)

MOLLER ET AL.

Examiner

Sikarl A. Witherspoon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 20, 2006 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-12 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago et al (US 5,012,008) further in view of Massie (US 3,992,453).

Drago et al teach the hydroformylation of olefins having from 2 to 6 carbon atoms in the presence of a liganded rhodium catalyst, and substituted or unsubstituted organic esters, aromatic hydrocarbons, organic derivatives of oxygen, such as propylene carbonate, etc., (col.4, line 52 to col. 6, line 55).

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Massie teaches a hydroformylation process wherein an ester of carbonic acid, i.e., ethylene carbonate, propylene carbonate, dipropyl carbonate, etc., is used as a promoter, in an amount of at least 15 by weight (col. 4, line 34 to col. 7, line 28).

The examiner contends that the instant claims are rendered obvious in view of the combined reference teachings, since it would have been obvious to a person of ordinary skill in the art, at the time the present invention was made, to employ as starting material, an olefinically unsaturated compound that has been recycled from the un-reacted starting material of a first or previous hydroformylation or any other source of olefinic compound. The examiner further contends that it would have been obvious to a person of ordinary skill in the art to employ any amount of solvent that would remain inert to the hydroformylation reaction, and yet, allow for optimal conversion of the olefinic material to the hydroformylation product. It would also have been obvious to employ a substituted cyclic carbonic ester in the process taught by Drago et al, since the reference teaches that organic derivatives of oxygen, such as propylene carbonate, may be substituted, and further, since Massie teaches several carbonic acid esters as a promoter in hydroformylation reactions in amounts of at least 1% by weight; a person of ordinary skill would reasonably expect the substituted or unsubstituted compound to be effective in its purpose, i.e., dispersing the rhodium catalyst and maintaining it in amorphous phase on the support material (col. 6, lines 34-55) according to Drago et al, and/or in increasing the linear selectivity of the desired product, according to Massie.

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Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago et al and Massie as applied to claims 1-4, 6-12 and 15-21 above, and further in view of Maher et al (WO 87/07261).

The instant claims limit the solvent used in the process of the present invention to substituted or unsubstituted hydrocarbons having from 10 to 50 carbon atoms, or olefins having from 3 to 24 carbon atoms.

Maher et al teach a hydroformylation reaction using a rhodium-containing catalyst in the presence of an organic polymer containing polar functional groups, including carbonates, in the presence of a solvent such as Texanol, a substituted hydrocarbon having at least 10 carbon atoms (p 32).

It would have been obvious to employ a solvent such as Texanol in the process of the instant invention, since Maher et al teach that said solvent can be used in hydroformylation processes that employ compounds such as carbonates, used to stabilize the rhodium catalyst.

Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

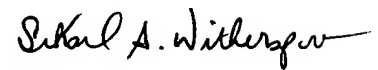
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

saw


SIKARL A. WITHERSPOON
PRIMARY EXAMINER